

**Cc:** Elizabeth A NWK Franklin[Elizabeth.A.Franklin@usace.army.mil]; Jeffrey Rakowski[RakowskiJJ@cdmsmith.com]; John Rolfe[jrolfe@demaximis.com]; Robert Law[rlaw@demaximis.com]; Sharon Budney[BudneySL@cdmsmith.com]; Vaughn, Stephanie[Vaughn.Stephanie@epa.gov]; Willard Potter[otto@demaximis.com]  
**To:** Hoppe, Michael[Hoppe.Michael@epa.gov]  
**From:** Stan Kaczmarek  
**Sent:** Thur 7/11/2013 9:54:38 PM  
**Subject:** RE: RM 10.9 Removal Action Pre-Dredge Survey

Mike,

Answers to your questions regarding the bathymetry survey are provided below in red type. I am copying Jeff Rokowski on this response as he has been designated by CDM to witness Friday's activities.

Contact Bill Potter or me if you have any questions.

Stan  
**Stan Kaczmarek, PE**  
**de maximis, inc.**  
**186 Center Street, Suite 290**  
**Clinton, NJ 08809**  
**(O) (908) 735-9315**  
**(C) (973) 978-9621**

>>> On 7/10/2013 at 3:29 PM, in message  
<97cb34550fb34cae92f4a15c60fb15e0@BY2PR09MB062.namprd09.prod.outlook.com>,  
"Hoppe, Michael" <Hoppe.Michael@epa.gov> wrote:

Stan,

I had one of our contractors help review the GLDD bathymetry SOP and we would like some clarification from the GLDD crew to ensure the following items are addressed.

I realize that it is late in the week but I'd like to ensure that the same methods (or at least similar methods) are utilized in this phase, as in the previous RI work.

Also, I expect to have a person from CDM at the dock on Friday to oversee the early bathymetry operations (land/dock side). We will be in touch tomorrow to ensure the dock time is the same.

**GLDD to clarify:**

1) How will GLDD be establishing a base station for the RTK GPS? Will they be using a local broadcast or establishing their own?

a. If it is a local broadcast, please describe the parameters in the report (ID, location, coordinates, etc.) for the record.

b. If GLDD is establishing their own, please describe the SOP. It is anticipated that GLDD would include verification with several NGS (or other agency) survey control points. This means that GLDD should "check-in" with other local control to verify the positions. Measured vs. published coordinates should be reported for the "check-in" points. And the base station coordinates should also be described.

Base station will be GLDD operated, transmitting a correction via UHF radio frequencies. The base is referenced to Landmarker Geospatial (LMG) control hubs that have been established in locations adjacent to the jobsite. All of the LMG control hubs have been checked against local NGS monuments. GLDD will check into these control hubs once daily while surveying, as described in the SOP document.

2)

How will GLDD establish a tide board for RTK Tides verification?

a. If there is an existing tide board, GLDD should verify that position prior to using it (e.g. check-in with survey equipment)

b. If GLDD is establishing a new one, it should be surveyed in and a brief discussion of the process would be recommended. Predicted tides should not be exclusively used as they are just predictions. Measured tides are often different from their predictions because of other meteorological phenomena that cannot be predicted (e.g. storm surges, river flows, etc.)

The project tide staff has been installed on the upriver end of the center fender of the DeJessa Bridge. The staff was established by leveling from a nearby LMG control hub and has been verified by RTK. The use of predicted tides does not meet GLDD's survey standards and has never been proposed for this project.

3)

Regarding the during-surveying procedure, it is recommended to run most of your lines parallel, but also run a few "cross-lines" perpendicular to the parallel lines. This allows for an easy QC check on the data to rule out any system errors. The data where the lines cross should be nearly equivalent (within a few tenths of a foot). If they are not, it might indicate a problem elsewhere in the system.

GLDD agrees running profile lines is a good QC practice. 2-3 profile lines will be run per day as a

QC check.

As an FYI, GLDD has been at the site running check lines recently and it appears that they may have difficulty covering the entire site (including side slopes) with their hydrographic survey. Land survey techniques, such as use of a total station, may be required near the landward boundary. Friday's survey will be a good opportunity for CH2M Hill, GLDD, and LMG personnel to assess the site and discuss options for collecting land survey data.

Michael Hoppe

USEPA Region 2

Response and Prevention Branch

Preparedness Section

Phone: (732) 906-6908 Fax: (732) 321-4425

Cell: (908) 420-4472



**From:** Stan Kaczmarek [mailto:StanK@demaximis.com]

**Sent:** Friday, July 05, 2013 11:41 AM

**To:** Hoppe, Michael

**Cc:** BudneySL@cdmsmith.com; kirchnersf@cdmsmith.com; Willard Potter; Robert Law; Vaughn, Stephanie

**Subject:** RM 10.9 Removal Action Pre-Dredge Survey

Mike,

Great Lakes Dredge and Dock (GLDD) is planning to conduct the River Mile 10.9 Removal Action pre-dredge bathymetric survey from Friday July 12 - Sunday July 14. Methodology is described in Section 7.0 of GLDD's Dredge and Operational Plan provided to you by email on Tuesday, July 2. As described in the attached notice, there is no room on board for additional observers, however the survey is being witnessed and will be certified by an independent Professional Land Surveyor.

With your concurrence, we will approve this activity and then provide notice of upcoming in-river activity to the local boat clubs and municipal authorities.

**Stan Kaczmarek, PE**

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